

[13] In an exemplary embodiment, the model employs a Stewart platform to produce an artificial force field of torques and forces for characterizing the spring and for manipulating the model.

BRIEF DESCRIPTION OF THE DRAWINGS

- [14] Fig. 1 is a schematic illustration of a known McPherson-type strut in an automobile suspension;
- [15] Fig. 2 is an exemplary force field generator employed as a spring model, according to the present invention, coupled to an automobile suspension;
- [16] Fig. 3 is a schematic illustration of the geometric relationship between upper and lower plates of the parallel mechanism shown in Fig. 2;
- [17] *Figs. 4a and 4b* are schematic side sectional elevations of positions of the mechanism shown in Fig. 2 in extended and compressed states, respectively;
- [18] Fig. 5 is a schematic of a hydraulic circuit for controlling the hydraulic cylinders generating the forces and torques in the model;
- [19] Fig. 6 is a schematic block diagram illustrating the control loop for operating the hydraulic circuit of Fig. 5; and
- [20] Fig. 7 is a comparison of the side force in a normal spring and in a pitch controlled spring designed using the model of Fig. 2.

DESCRIPTION OF THE INVENTION

[21] A suspension 40, similar to the suspension 10 shown in Fig. 1, and wherein similar elements have the same reference numbers, is shown in Fig. 2. The suspension 40 employs a force field generator 42 for carrying out the method according to the invention. The mechanism 42, known as a Stewart Platform, employs a lower platform 44 having a central